Ohio EPA Comments draft OU2 RI/FS WP (January 2014)
3/13/14

The investigations proposed in the current draft OU2 RI/FS WP are inadequate to determine the nature and extent of contamination and to support analysis of remedial alternatives in the feasibility study. Ohio EPA requests that the following issues be resolved before the approval of the OU2 RI/FS WP.

Soil/fill investigation for purposes of direct contact risks:

1. State solid waste ARARs are applicable to the entire permitted landfill, this would include the OU1 parcels as well as the Quarry Pond and Ron Barnett and Jim City Parcels on OU2. The solid waste cap component is applicable to the southern landfill parcels, just as it is to the northern landfill parcels as the entire site was licensed as a solid waste landfill. However, Ohio EPA would entertain a variance from these applicable requirements for areas of the southern parcels that were not used for disposal.

   If USEPA believes the solid waste ARARs do not apply to the southern parcels of the landfill, Ohio EPA requests that USEPA respond with the rationale to support that view.

   USEPA has also previously determined that the waste in the northern portion of the landfill cannot be characterized by sampling. For this reason, the soil/fill investigation on the southern landfill parcels of OU2, which seeks to characterize the extent of contamination within the soil/fill material for purposes of a human health and ecological risk assessment, is inherently inadequate for that purpose and unnecessary given that applicable ARARs require the area be capped. The attempt to characterize the waste in the southern part of the landfill through sampling runs directly counter to determinations USEPA has made regarding the landfill parcels of OU1 – that no matter how many samples are collected, the waste is heterogeneous and cannot be adequately characterized by sampling.

   If USEPA believes that the waste in the southern parcels can be characterized by sampling for purposes of risk assessment, and that a decision regarding capping this area is dependent on the outcome of the risk assessment (as opposed to being driven by applicable ARARs) Ohio EPA requests that USEPA respond with the rationale to support that view.

Ground water investigation for southern landfill parcels dependent upon soil/fill investigation:

1. The current draft OU2 RI/FS WP proposes to make ground water investigations in the southern parcels of the landfill contingent on the evaluation of sample results from 12 samples taken over 15 acres of heterogeneous landfill material and screened against soil

leaching standards. This is not a technically defensible approach that Ohio EPA can support. Ground water investigations in the southern parcels of the landfill need to be conducted irrespective of the results and evaluation of these 12 samples. The investigations should focus on the downgradient perimeter of the southern landfill parcels and use direct push technology to screen the area before selecting locations and depths for permanent monitoring wells.

The soil/fill investigation may help in identifying areas of ground water contamination within the landfill; however, the soil/fill investigation should only seek to help guide the location of ground water samples. The soil/fill investigation should not be the deciding factor of whether or not a ground water investigation occurs. It is not technically defensible to have the ground water investigation hinge solely on a soil/fill investigation, particularly when the soil/fill investigation consists of 12 samples taken over 15 areas of heterogeneous landfill material.

Lack of ground water investigation proposal:

1. The ground water investigation needs to address 1) contamination within OU1 and OU2 as this could be a regional issue (deeper aquifer issues, would include the background investigation on DP&L and Delphi if the PRPs want to try and link contamination from OU1 and possibly OU2 to off-site), 2) plumes migrating away from the OU1 perimeter in both shallow and lower aquifer if it is determined that lower aquifer contamination results from OU1, 3) contamination to ground water from landfilling on OU2, 4) contaminated ground water that has migrated away from the perimeter of the OU2 southern landfill parcels.

2. Background ground water, in particular "deep" aquifer contamination: The investigation for deep ground water contamination beneath OU1 and possibly beneath OU2 should be addressed in the current OU2 RI/FS WP as it is independent of tracking plumes in the shallow (above 675 AMSL) ground water migrating from of OU1 and it is independent of contaminated ground water that originates on the southern landfill parcels of OU2. This needs to include a background/up-gradient investigation and should consider historic information from pumping well influences, as well as considering current ground water flow. This investigation is not mentioned anywhere in the current OU2 RI/FS WP, yet it is part of the OU2 RI/FS work.

3. Tracking ground water plumes migrating from OU1: While it is necessary to evaluate the information collected during Phase 1 of the OU1 Ground Water and Data Gap Investigation, an outline of how the Phase 1 data will help guide the investigation to track such plumes should be included in the OU2 RI/FS WP. The OU2 RI/FS WP should include how the plumes identified in Phase 1 of the OU1 Ground Water and Data Gap

Investigation will be delineated.

4. For the southern landfill parcels: Even if one were to accept a soil/fill investigation of 12 samples taken over 15 acres of heterogeneous landfill material as the deciding factor in whether or not a ground water investigation will be conducted, the outline for the ground water investigation that would be done if the soil/fill samples had concentrations of chemicals above leaching standards has not been provided. How would such a ground water investigation be conducted?

   The ground water investigation should address the perimeter of the southern landfill parcels to determine if contaminated ground water is leaving the perimeter. Ground water samples should also be taken from all soil/fill sample locations.

Specific comments:

1. Page 10, section 2.1, Quarry Pond Data Gaps – a missing data gap is the drum and debris investigation. Ohio EPA in conjunction with the Ohio Attorney General's Office - Bureau of Criminal Investigation and Ohio Department of Natural Resources did a sonar scan of the Quarry Pond in 2012 and identified objects that could be potential drums and tires, as well as objects that are definitely vehicles. The objects will need to be identified and sampled as may be necessary.
2. Page 10, section 2.1, Quarry Pond Data Gaps – the last bullet point discusses characterization of the soil/sediment for human accessibility, it should also be noted that the Quarry Pond needs to be evaluated for ecological receptors as well as human receptors.
3. Page 14, section 2.2, Jim City and Ron Barnett Parcel Data Gaps – the second bullet indicates the need for characterization of ground water conditions below the fill material and along the eastern perimeter of the Jim City Parcel. CRA has added a note to the side of this bullet that this investigation is no longer needed after the Phase 1A investigation in the MW-210 area – the MW-210 investigation collected shallow ground water grab samples into the upper 5 ft. of ground water along the perimeter of the Jim City parcel. The work plan needs to explain how this sampling is adequate for purposes of completing a baseline human health and ecological risk assessment or include a sampling plan sufficient for such purposes.
4. Page 14, section 2.2, Jim City and Ron Barnett Parcel Data Gaps – the third bullet indicates that soil gas monitoring will be done only if a soil investigation (and ground water investigation, if based off of the soil investigation is necessary) indicates that there may be contaminants present that could pose a soil gas issue. CRA indicates that four soil gas probes have already been put in place along the perimeter of the parcel and when sampled only sample number 9 had concentrations that could pose an indoor air threat. CRA goes on to indicate that the contamination present in GP-09 is not the source of

vapor intrusion threats to Building 24. It is important to note that the sub-slab depressurization systems installed as part of the removal action are only a temporary fix and it will be necessary to address the sources of soil gas contamination. In addition, the situation described is one area of the southern parcels, there are other areas of the southern parcels that will need to be investigated for VI risks.

5. Even if one were to accept the investigative approach to the ground water investigation, sections 2.4 and 5.7, which outline the proposed ground water investigation, do not agree.
6. Page 15, section 2.4, Groundwater – In the first sentence of the third paragraph, the term Site with a capital S is used. Site as defined in the orders includes the entire South Dayton Dump and Landfill property and any contamination associated with the property. While Ohio EPA agrees the scope of the OU2 ground water investigation is Site wide ground water contamination, the outline for the ground water investigation only discuss sections 2.1 and 2.2. Sections 2.1 and 2.2 only address contaminated ground water associated with the southern landfill parcels. The OU2 ground water investigation needs to address groundwater conditions within OU1, what has left OU1, within OU2 landfill parcels, and what has left the OU2 landfill parcels.
7. Page 15, section 2.4, Groundwater – The third paragraph states that ground water data gaps noted in section 2.1 and section 2.2 will be proposed if necessary after the completion of the OU1 Ground Water and Data Gap Investigation. The data gaps mentioned in section 2.1 and 2.2 have to do with contamination originating from the OU2 southern parcels and what has left the southern parcel perimeter. The OU1 investigation is seeking to determine where contaminated ground water from OU1 has left OU1. The OU1 investigation is not dependent upon the investigation regarding contamination originating from the material within the OU2 southern parcels and whether or not that contamination has left the perimeter of the OU2 parcels.
8. Page 27, section 5.2, OU2 Parcels Soil and Fill Investigation
    i. It is not clear how the soil/fill investigation will indicate threats to ground water as that criteria has been removed from the soil/fill description (there has not previously been mention of the soil gas investigation in this section). If the soil/fill investigation is to be the basis for a ground water or soil gas investigation, why are these goals not also listed?
    ii. The work plan does not describe how the soil/fill samples would be screened to indicate the need to look for soil gas contamination.
    iii. The third bullet point states that 12 samples will be collected below 15 ft. to screen for potential leaching threats to ground water. Even if one were to accept the ground water investigation be dependent on soil/fill screening, there is no discussion in the work plan that indicates why these samples have been chosen from 15 ft. It is not clear why these samples would be screened from only below 15 ft for leaching potential. The work plan should address all leaching threats, even those that could

occur above 15 ft.

iv. Previously, ground water grab samples had been proposed in the soil/fill investigation boreholes. In this latest revision, that has been removed. These ground water samples need to be included in the work plan. The current draft OU2 RI/FS WP does not discuss any ground water sampling, yet USEPA has deferred all ground water investigations to OU2.